

TITLE: ADJUSTER FOR ELEVATED FLOOR

BACKGROUND OF THE INVENTION

1. Field of the invention

The present invention is related to an adjuster for an
5 elevated floor, and especially to such an adjuster for an
elevated floor that can lower the height of an assembled elevated
floor, and can adjust the height of the elevated floor above the
latter; it has a wide range of application, and can reduce waste
of space, it is suitable for use in novel and used spaces of
10 offices.

2. Description of the Prior Art

Following advance of science and technology, people contact
more and more lines for use; particularly in office buildings,
various lines (such as networks and cables) are arranged in a
15 mutually crossing and gathering mode. Therefore, at the initial
of construction of an office building, pipelines are embedded
in advance; however, the initial planning often is unable to meet
the requirement of continuous extension of pipelines afterwards,
and pipelines are differently required in different arts.

20 As to the above stated situation, elevated floors are
generally provided; and various pipelines are embedded in
channels under the elevated floors. A conventional adjuster for
an elevated floor "A" is shown in Fig. 6, which comprises a floor
plate "B"; the floor plate "B" is provided with a connecting
25 hole "C" to connect a threaded pipe "D" which has therebeneath

a nut "E", and a footing seat "F" provided on the upper end thereof with a thread is thread connected with the threaded pipe "D" and the nut "E", thereby the footing seat "F" can be used to adjust height of the floor and then can be fixed by using the
5 nut "E". The above structure can acquire the function of hiding pipelines; however, it still has the following defects:

1. The floor itself has a thickness of about 3 cm, plus the footing seat and the fixing nut beneath the footing seat (about 1.5 cm), an elevated floor after assembling will have
10 a height of at least 6 to 10 cm, and this is the maximum limitation of such elevated floor in assembling and production presently; for a new building preserved with larger heights in space, it will not result a too large problem in space; but for an old building with lower indoor
15 heights originally, it will result waste of space in that the indoor heights will be reduced to make feeling of oppression.

2. A conventional elevated floor structure has a footing seat screw connected with the threaded pipe and further has the
20 nut beneath the threaded pipe for fixing the footing seat, when the floor is adjusted to a suitable height, by pressing tight of the nut to fix the footing seat, the footing seat can be avoided from loosening in use to fail in supporting the floor. However, in fixing the footing seat with the nut,
25 an adjustment tool shall be extended in from one side of the

floor for adjustment, so that the side of the floor shall be left with a space for extending of the tool therein, and for the convenience of adjusting the nut; the thickness of the nut shall not be too small that may induce inconvenience of adjusting. According to the above stated causes, the height after assembling of the conventional elevated floor is unable to reduce, and adjusting for use of the floor will be quite inconvenient.

In view of the above defects to be solved, an adjuster for an elevated floor not only can have the total height of the elevated floor reduced, but also the elevated floor can have its height adjusted from above the latter; the inventor provides the present invention based on his professional experience of years and continuous studying and developing.

SUMMARY OF THE INVENTION

The primary object of the present invention is to provide an adjuster for an elevated floor, wherein a threaded pipe is thread connected inside with a footing seat and a fixing screw, without to use a nut under the elevated floor, this can reduce the total height of the elevated floor to a degree smaller than 4 cm.

The secondary object of the present invention is to provide an adjuster for an elevated floor in which the fixing screw has a through hole extending from top to bottom, and the through hole is larger than an adjustment hole of the footing seat, so that

an adjustment tool can be extended through the through hole to adjust the height of the elevated floor.

To get the above stated objects, an adjuster for an elevated floor of the present invention is disposed for connected with
5 a connecting hole which is on the elevated floor. The adjuster comprises a threaded pipe, a footing seat and a fixing screw, wherein the threaded pipe has an inner thread for connecting with the connecting hole which is on the elevated floor. The footing seat has an external thread on an external upper end thereof for
10 threading and connecting into said threaded pipe, and further has an adjustment hole on its upper end. The fixing screw is mounted above the footing seat and is thread connected into the threaded pipe, rotation of the screw can press tight the footing seat, the fixing screw has a through hole extended from top to
15 bottom, which is larger than the adjustment hole of the footing seat, so that the adjustment tool can be extended through the through hole and inlaid in the adjustment hole for adjusting the displacement of the threaded pipe relative to the footing seat.

The present invention will be apparent after reading the
20 detailed description of the preferred embodiment thereof in reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is an analytic perspective view of an adjuster for an elevated floor of the present invention;

25 Fig. 2 is a sectional view of the adjuster for an elevated

floor of the present invention after assembling;

Fig. 3 is a schematic sectional view showing use of the adjuster for an elevated floor of the present invention;

Fig. 4 is a schematic view showing the positions of pipelines
5 in use of the adjuster for an elevated floor of the present invention;

Fig. 5 is another schematic sectional view showing use of the adjuster for an elevated floor of the present invention;

Fig. 6 is a sectional view of a conventional adjuster for
10 an elevated floor after assembling.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring firstly to Figs. 1 and 2 showing a preferred embodiment of an adjuster 1 for an elevated floor 2 of the present invention, the adjuster 1 is connected with a connecting hole
15 21 provided on the elevated floor 2. It comprises mainly: a threaded pipe 3, a footing seat 4 and a fixing screw 5.

A bush 22 is provided between the threaded pipe 3 and the connecting hole 21 on the elevated floor 2, and has an inner hexagonal hole 221. The threaded pipe 3 is in the form of an
20 inversed "T" and has an inner thread 31, and has on the bottom end thereof a circular base 32. The upper portion of the threaded pipe 3 is a hexagonal stub 33 for connecting with the inner hexagonal hole 221 of the bush 22.

The footing seat 4 has a base 41 for standing on the ground,
25 the footing seat 4 is provided on the external upper end thereof

with an external thread 42 for threading and connecting with the threaded pipe 3, and the footing seat 4 further has an hexagonal adjustment hole 43 on its upper end.

The fixing screw 5 is mounted above the footing seat 4 and is thread connected into the threaded pipe 3, the fixing screw 5 has a hexagonal through hole 51 extending from top to bottom, the inner tangent circle of the through hole 51 is larger than the outer contact circle of the hexagonal adjustment hole 43 of the footing seat 4.

Referring to Fig. 3 showing use of the present invention, when present invention is used to assemble with the elevated floor 2, the footing seat 4 can be rotated to adjust the elevated floor 2 to a suitable level, then the fixing screw 5 above the footing seat 4 is rotated to move downwards, and the footing seat 4 can be pressed tight for fixing. When the ground is uneven, or the elevated floor 2 needs to be slightly adjusted in height, the fixing screw 5 is loosened, and an adjustment tool (not shown) can be extended through the through hole 51 of the fixing screw 5 from above the elevated floor 2 to be inlaid in the adjustment hole 43 of the footing seat 4 for the convenience of adjusting the displacement of the threaded pipe 3 relative to the footing seat 4, while at the same time, the elevated floor 2 is moved up or down. After the adjustment and positioning, the fixing screw 5 is then rotated to be tight by against the footing seat 4. The above stated adjustment of height of the elevated floor

2 is thus performed on the elevated floor 2 and is convenient for operation.

Referring to Fig. 4, by the fact that in practicing the present invention, the elevated floor 2 is directly pressed tight by using the fixing screw 5, hence the nuts used conventionally under an elevated floor can be saved, and the gross height of the elevated floor 2 can be reduced to be smaller than 4 cm after deducting the adjustment space of the tool, this breaks through the conventional limitation for an elevated floor. When the height after assembling of the elevated floor 2 is largely reduced, the elevated floor 2 further leaves a sideward space for pipelines 60 without influence the goal of providing the elevated floor 2.

Referring to Fig. 5 showing application of the present invention to a conventionally designed elevated floor 2 (with a height larger than 4 cm), by using the fixing screw 5, the present invention can also achieve the same function of locking and adjustment, and can be operated completely on the elevated floor 2 and is more convenient in assembling.

The present invention thereby has the following advantages:

1. The present invention uses the fixing screw to press tight the footing seat to reduce the gross height of the elevated floor to be smaller than 4 cm, it is suitable for use in new and old buildings, particularly in an old building wherein the planned spaces in floors are insufficient, this can

reduce waste of space and can avoid the feeling of oppression.

2. In using the present invention, with the fixing screw having a through hole extending from top to bottom and being larger than the adjustment hole of the footing seat, an adjustment tool can be extended through the through hole from above the floor to be inlaid in the adjustment hole for the convenience of adjusting height of the elevated floor, which adjusting is performed on the elevated floor rather than from a side of the floor, it is more convenient in operation.

In conclusion, according to the above disclosed, the present invention can get the expected objects thereof to provide an adjuster for an elevated floor which is able to lower the total height of the elevated floor and is convenient for adjusting above the elevated floor, it is undoubtedly industrially valuable. Having thus described my invention, what I claim as new and desire to be secured by Letters Patent of the United States are:

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